WEST Search History

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DATE: Thursday, June 15, 2006

Hide?	Set Name	Query	Hit Count
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☐	L17	US-5449313-A.did.	1
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ	
☐	L16	3848363	37
		DB=USPT; PLUR=YES; OP=ADJ	
☐	L15	US-5044128-A.did.	1
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☐	L11	jp 59-102569	0
☐	L10	jp 59102569	0
		DB=DWPI; PLUR=YES; OP=ADJ	
☐	L9	jp 59102569	1
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☐	L8	jp 59102569	1
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		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=ADJ	
☐	L6	451/93.ccls. and (density or gravity)	17
☐	L5	L4 and clean$4.ti.	130
☐	L4	(magnetic with clean$4) and ((density or gravity) same separat$5)	1212
☐	L3	(magnetic with clean$4) and (density or gravity)	5318
☐	L2	L1 and (density or gravity)	27
☐	L1	134/7.ccls. and magnetic	50

END OF SEARCH HISTORY

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L16: Entry 34 of 37 File: DWPI Feb 7, 2006

DERWENT-ACC-NO: 1995-036209
DERWENT-WEEK: 200612

TITLE: Magnetorheological fluid polishing for object e.g. glass optical lens, semiconductor, tube or ceramic - determining characteristics of contact between object and polishing zone, controlling fluid consistency and moving object relative to fluid

INVENTOR: GLEB, L K ; GORODKIN, G R ; GORODKIN, S R ; KASHEVSKY, B E ; KORDONSKY, W I ; PROKHOROV, I V

PATENT-ASSIGNEE:

ASSIGNEE	CODE
BYELOCORP SCI INC	BYELN
GLEB L K	GLEBI
GORODKIN G R	GOROI
GORODKIN S R	GOROI
KASHEVSKY B E	KASHI
KORDONSKY W I	KORDI
PROKHOROV I V	PROKI

PRIORITY-DATA: 1993BY-0000863 (December 9, 1993), 1993US-0071813 (June 4, 1993), 1992US-0868466 (April 14, 1992), 1992US-0930116 (August 14, 1992), 1992US-0966919 (October 27, 1992), 1992US-0966929 (October 27, 1992), 1995US-0525453 (September 8, 1995), 1996US-0676598 (July 3, 1996), 2002US-0299189 (November 18, 2002)

Search Selected Search ALL Clear

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
CA 2497731 C	February 7, 2006	E	000	B24B039/00
WO 9429077 A1	December 22, 1994	E	061	B24B039/02
US 5449313 A	September 12, 1995		034	B24B031/112
EP 703847 A1	April 3, 1996	E	061	B24B039/02
US 5577948 A	November 26, 1996		034	B24B031/112
JP 08510695 W	November 12, 1996		061	B24B031/00
EP 703847 A4	July 9, 1997		000	B24B039/02
EP 703847 B1	April 10, 2002	E	000	B24B039/02
DE 69430370 E	May 16, 2002		000	B24B039/02
US 6503414 B1	January 7, 2003		000	B24B001/00

☐	KR 335219 B	November 7, 2002		000	B24B039/02
☐	US 20030087585 A1	May 8, 2003		000	B24B049/00
☐	JP 2005040944 A	February 17, 2005		028	B24B037/00
☐	CA 2497731 A1	December 22, 1994	E	000	B24B039/00
☐	CA 2497732 A1	December 22, 1994	E	000	C09G001/00
☐	CA 2163671 C	October 25, 2005	E	000	B24B039/02

DESIGNATED-STATES: CA JP KR RU UA AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

CITED-DOCUMENTS:DD 227372 ; RU 1089968 ; RU 1154938 ; US 32573 ; US 3848363 ; US 3897350 ; US 4186528 ; US 4821466 ; US 4839074 ; US 4992190 ; No-Citns.

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
CA 2497731C	June 3, 1994	1994CA-2163671	Div ex
CA 2497731C	June 3, 1994	1994CA-2497731	
WO 9429077A1	June 3, 1994	1994WO-US06209	
US 5449313A	April 14, 1992	1992US-0868466	CIP of
US 5449313A	August 14, 1992	1992US-0930116	CIP of
US 5449313A	October 27, 1992	1992US-0966919	CIP of
US 5449313A	October 27, 1992	1992US-0966929	CIP of
US 5449313A	June 4, 1993	1993US-0071813	
EP 703847A1	June 3, 1994	1994EP-0919329	
EP 703847A1	June 3, 1994	1994WO-US06209	
EP 703847A1		WO 9429077	Based on
US 5577948A	April 14, 1992	1992US-0868466	CIP of
US 5577948A	August 14, 1992	1992US-0930116	CIP of
US 5577948A	October 27, 1992	1992US-0966919	CIP of
US 5577948A	October 27, 1992	1992US-0966929	CIP of
US 5577948A	June 4, 1993	1993US-0071813	Cont of
US 5577948A	September 8, 1995	1995US-0525453	
US 5577948A		US 5449313	Cont of
JP 08510695W	June 3, 1994	1994WO-US06209	
JP 08510695W	June 3, 1994	1995JP-0501936	
JP 08510695W		WO 9429077	Based on
EP 703847A4	June 3, 1994	1994EP-0919329	
EP 703847B1	June 3, 1994	1994EP-0919329	
EP 703847B1	June 3, 1994	1994WO-US06209	
EP 703847B1		WO 9429077	Based on
DE 69430370E	June 3, 1994	1994DE-0630370	
DE 69430370E	June 3, 1994	1994EP-0919329	
DE 69430370E	June 3, 1994	1994WO-US06209	
DE 69430370E		EP 703847	Based on
DE 69430370E		WO 9429077	Based on

US 6503414B1	April 14, 1992	1992US-0868466	CIP of
US 6503414B1	August 14, 1992	1992US-0930116	CIP of
US 6503414B1	October 27, 1992	1992US-0966919	CIP of
US 6503414B1	June 4, 1993	1993US-0071813	Cont of
US 6503414B1	September 8, 1995	1995US-0525453	Div ex
US 6503414B1	July 3, 1996	1996US-0676598	
US 6503414B1		US 5449313	Cont of
US 6503414B1		US 5577948	Div ex
KR 335219B	June 3, 1994	1994WO-US06209	
KR 335219B	December 4, 1995	1995KR-0705488	
KR 335219B		KR 96702786	Previous Publ.
KR 335219B		WO 9429077	Based on
US20030087585A1	April 14, 1992	1992US-0868466	CIP of
US20030087585A1	August 14, 1992	1992US-0930116	CIP of
US20030087585A1	October 27, 1992	1992US-0966919	CIP of
US20030087585A1	June 4, 1993	1993US-0071813	Cont of
US20030087585A1	September 8, 1995	1995US-0525453	Div ex
US20030087585A1	July 3, 1996	1996US-0676598	Cont of
US20030087585A1	November 18, 2002	2002US-0299189	
US20030087585A1		US 5449313	Cont of
US20030087585A1		US 5577948	Div ex
US20030087585A1		US 6503414	Cont of
JP2005040944A	June 3, 1994	1995JP-0501936	Div ex
JP2005040944A	August 19, 2004	2004JP-0239946	
CA 2497731A1	June 3, 1994	1994CA-2163671	Div ex
CA 2497731A1	June 3, 1994	1994CA-2497731	
CA 2497732A1	June 3, 1994	1994CA-2163671	Div ex
CA 2497732A1	June 3, 1994	1994CA-2497732	
CA 2163671C	June 3, 1994	1994CA-2163671	
CA 2163671C	June 3, 1994	1994WO-US06209	
CA 2163671C		WO 9429077	Based on

2163671 C INT-CL (IPC): B24 B 1/00; B24 B 31/00; B24 B 31/112; B24 B 37/00; B24 B 37/02; B24 B 39/00; B24 B 39/02; B24 B 49/00; B24 B 51/00; C09 G 1/00

RELATED-ACC-NO: 1993-351970 ;1994-082921

ABSTRACTED-PUB-NO: EP 703847B
BASIC-ABSTRACT:

The method involves creating a polishing zone (10) within a magnetorheological fluid (2), determining the rate of material removal for the object (4), and determining the direction and velocity of movement of the polishing zone relative to the object. The number of polishing cycles is determined.

The consistency of the fluid in the polishing zone is controlled. The object is brought into contact with the polishing zone of the fluid. The object and the polishing zone then move with respect to each other. The rate of material removed is determined together with the determination of the spatial distribution of the

material removal.

ADVANTAGE - Is highly accurate and can be automatically controlled.
ABSTRACTED-PUB-NO:

US 5449313A
EQUIVALENT-ABSTRACTS:

The method involves creating a polishing zone (10) within a magnetorheological fluid (2), determining the rate of material removal for the object (4), and determining the direction and velocity of movement of the polishing zone relative to the object. The number of polishing cycles is determined.

The consistency of the fluid in the polishing zone is controlled. The object is brought into contact with the polishing zone of the fluid. The object and the polishing zone then move with respect to each other. The rate of material removed is determined together with the determination of the spatial distribution of the material removal.

ADVANTAGE - Is highly accurate and can be automatically controlled.

The method involves creating a polishing zone within a magnetorheological fluid. Controlling the consistency of the fluid in the polishing zone. Bringing the object into contact with the polishing zone of the fluids. Causing the object and the polishing zone to move with respect to each other. Determining the rate of material removal for the object. Determining the direction and velocity of movement of the polishing zone relative to the object.

The number of cycles of polishing required is determined by determining the initial root means square height of surface irregularities of the object. Determining the thickness of a subsurface damage layer. Determining the initial surface shape. Determining the thickness of the material layer to be removed during one cycle of polishing.

US 5577948A

A method of finishing a workpiece surface using magnetorheological fluid, comprising:

positioning the workpiece at a clearance from a surface adapted to carry magnetorheological fluid;

introducing a flow of magnetorheological fluid through said clearance;

applying a magnetic field substantially at said clearance to create a polishing or work zone in the magnetorheological fluid, said zone forming a transient tool for engaging and causing material removal at a portion of the workpiece surface, said zone engaging said workpiece surface at an area smaller than the area of the workpiece surface to be finished; and

moving the workpiece or the zone relative to the other to expose different portions of the workpiece surface to the zone for predetermined dwell times to selectively finish said portions of said workpiece surface to predetermined degrees.

WO 9429077A

CHOSEN-DRAWING: Dwg.1/30 Dwg.1/30 Dwg.1/30

TITLE-TERMS: FLUID POLISH OBJECT GLASS OPTICAL LENS SEMICONDUCTOR TUBE CERAMIC

DETERMINE CHARACTERISTIC CONTACT OBJECT POLISH ZONE CONTROL FLUID CONSISTENCY MOVE OBJECT RELATIVE FLUID

DERWENT-CLASS: P61 U11 X25

EPI-CODES: U11-C06A1A; X25-A03C3; X25-A05;

SECONDARY-ACC-NO:
Non-CPI Secondary Accession Numbers: N1995-028574

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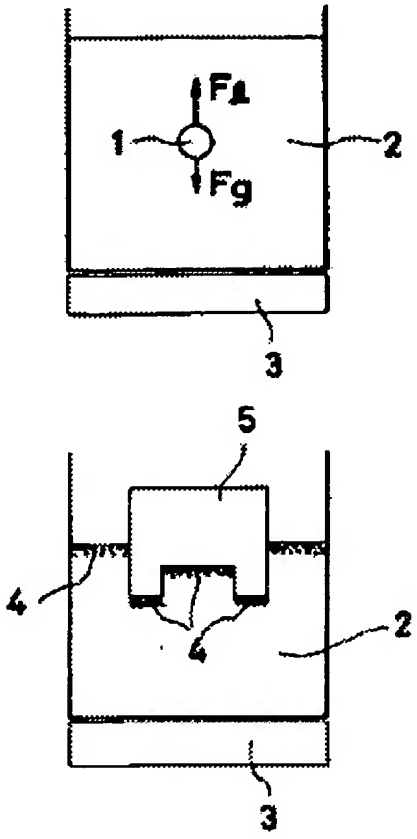
POLISHING METHOD EMPLOYING MAGNETIC FLUID

Publication number:	JP59102569
Publication date:	1984-06-13
Inventor:	KAWADA KENJI
Applicant:	TAIHO KOGYO CO LTD
Classification:	
- international:	***B24B31/10;*** **B24B31/00;** (IPC1-7): B24B31/14
- european:	B24B31/10B
Application number:	JP19820208605 19821130
Priority number(s):	JP19820208605 19821130

Abstract of **JP59102569**

PURPOSE:To perform fine finish polish on any shape of polishing face, by applying magnetic field on magnetic fluid mixed with non-magnetic polishing particles to float the polishing particles through magnetic floating force of magnetic fluid thus to perform polishing. CONSTITUTION:Non-magnetic material 1 or polishing particles 4 such as cerium oxide is mixed with magnetic fluid 2 while adding polishing particle bearing material then applied with magnetic field to function downward gravity Fg and upward floating force Fl on the non-magnetic material 1. Thereafter non-magnetic polishing particles 4 are mixed to set such condition as F=Fg+Fl<0, the polishing particles 4 will float to contact with desired pressure against the surface of polishing material 5 facing with the liquid level of magnetic fluid 2. When rotating or reciprocating the polishing material 5 or moving the magnet 3 relatively, the face of polishing material 5 is polished. Consequently any shape of polishing face can be finely polished.



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L6: Entry 10 of 17 File: JPAB Jun 13, 1984

PUB-NO: JP359102569A
DOCUMENT-IDENTIFIER: JP 59102569 A
TITLE: POLISHING METHOD EMPLOYING MAGNETIC FLUID

PUBN-DATE: June 13, 1984

INVENTOR-INFORMATION:
NAME COUNTRY
KAWADA, KENJI

ASSIGNEE-INFORMATION:
NAME COUNTRY
TAIHOO KOGYO KK

APPL-NO: JP57208605
APPL-DATE: November 30, 1982

US-CL-CURRENT: 451/93
INT-CL (IPC): B24B 31/14

ABSTRACT:

PURPOSE: To perform fine finish polish on any shape of polishing face, by applying magnetic field on magnetic fluid mixed with non-magnetic polishing particles to float the polishing particles through magnetic floating force of magnetic fluid thus to perform polishing.

CONSTITUTION: Non-magnetic material 1 or polishing particles 4 such as cerium oxide is mixed with magnetic fluid 2 while adding polishing particle bearing material then applied with magnetic field to function downward gravity Fg and upward floating force Fl on the non-magnetic material 1. Thereafter non-magnetic polishing particles 4 are mixed to set such condition as $F=Fg+Fl<0$, the polishing particles 4 will float to contact with desired pressure against the surface of polishing material 5 facing with the liquid level of magnetic fluid 2. When rotating or reciprocating the polishing material 5 or moving the magnet 3 relatively, the face of polishing material 5 is polished. Consequently any shape of polishing face can be finely polished.

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